4/18/16

Overview of EPA's PFC Mapping Project

Mission:

Identify potential sources of polytetrafluoroethylene chemicals,, specifically PFOA/PFOS, to drinking water systems in Region 1. Create a regional strategy to communicate our findings of potential exposure and identify areas for further investigation.

Goals:

- Identify potential sources in the region
- Determine distance of potential sources from drinking water
- Identify most likely potential sources based on research; other positive detects; etc.
- Identify gaps where additional research is needed (e.g., private wells)
- Develop strategy to communicate results internally and externally

Project approach

1. Identified potential New England sources
    a. Airports
    b. Fire Training Facilities
    c. Industry category for PFCs resins and Teflon manufacturing, including but not limited to metal coating, engraving, synthetic polymers, foam manufacturing (using NAICS number 28210213)
    d. Other known facilities: Warren Wire; St. Gobain Facilities
    e. EPCRA Tier II facilities (a facility that is required under OSHA to have available an MSDS for a hazardous chemical and that stores the hazardous chemical above the applicable threshold quantity (10,000 pounds for PFCs))

2. Analyses : Created spreadsheet with potential sources and addresses
    a. Airports (EPA database)
    b. Fire training facilities (web search)
    c. EPCRA Tier II facilities (from research conducted in-house)
    d. Triaged 175 industrial facilities (using web data)
        i. Red - potential source of PFCs - company website expressly mentions use of PFCs in production operations conducted at specific facility
        ii. Yellow - - additional research necessary - company website mentions production operations that may use PFCs, but no express mention of PFCs
        iii. Green – low potential – may use or have used PFCs in company production operations, but not enough information to confirm that production operations occurred at specific facility
        iv. Blue – unlikely to be a potential source of PFCs
    e. Potential sources relative to drinking water systems using GIS
        i. Distance to public water systems; w/in ¼ mile; ½ mile and 1 mile
        ii. Type of system community, transient or non-transient non-community, etc.
        iii. Population served

3. UCMR analyses

   a. Large systems that had any detection of PFCs in New England
   b. 26 smaller systems that collected data under UCMR

4. Communicated with EPA Regions 2 and 3
   a. Shared issues and approaches
   b. Changed our distance from drinking water supply wells up to a mile based on Region 2 and 3's approach
5. Mapping
   a. Maps with the analysis of potential sources and drinking water exposure
   b. Map UCMR data against potential sources

6. Identify potential data gaps and limits from research
   a. Private drinking water wells
   b. NAICS and EPCRA Tier II search methodology
   c. Chrome plating facilities in operation 1960s-2000s
   d. Triage methodology
   e. Historical sources
   f. Additional sources from other programs (e.g., RCRA corrective action, air permits)
   g. Hydrological, fate and transport considerations
   h. Other potential sources (landfills, leachate, recycling facilities, waste water treatment facilities, refineries, large rail yards, food packaging, cosmetics, pesticides, lubricants/surfactants/emulsifiers, electronics, food containers and contact paper, paints/varnishes/sealants, cleaning products, photograph development, semiconductor industry, aviation fluids, packaging papers, oil and mining, stain repellants on carpets and upholstery, leathers, etc.)

Project Results

1. Communicate results internally and externally
   a. Finalize map(s) based on data analyses
   b. Presentation
   c. Report